

CLAIMS

1 1. Submersible motor-driven pump, which comprises a housing; an intake
2 pipe mounted in the housing; an impeller mounted in the intake pipe to produce an intake
3 flow and to convey a fluid to a discharge connection, said impeller being supported on a
4 shaft; and a can into which the shaft extends, characterized by the fact that an anti-freeze
5 device (19, 23, 25, 27) for the shaft (15) is installed in the housing (3).

1 2. Submersible motor-driven pump in accordance with Claim 1, characterized
2 by the fact that the anti-freeze device (19, 23, 25, 27) has an elastic bushing (19), in which a
3 bearing (19) supports the shaft (15) at the entrance into the can (17), and a water displacer
4 (23) is arranged in a free space that extends concentrically around the shaft (15).

1 3. Submersible motor-driven pump in accordance with Claim 1 or Claim 2,
2 characterized by the fact that the anti-freeze device (19, 23, 25, 27) has an elastic impeller
3 mounting (27).

1 4. Submersible motor-driven pump in accordance with any of Claims 1 to 3,
2 characterized by the fact that an elastic diaphragm (25) is installed at a point (11) that is the
3 lowest point in the operating position and can expand when subjected to ice pressure, thereby
4 reducing the pressure of the ice on the shaft (15).

1 5. Submersible motor-driven pump in accordance with any of the preceding
2 claims, characterized by the fact that the shaft (15) is a ceramic shaft.